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ABSTRACT

The academic standings of provisionally admitted high school graduates and matched controls (regular admissions) at a state university were analyzed after one to three years. The results revealed highly significant differences in favor of the controls. The criterion was academic status at the university. Analysis of covariance controlling the differences in high school grade point average still showed a difference in favor of the controls at the five percent level of significance. The provisionally admitted students' relative weakness in quantitative reasoning is suggested as a possible contributing factor. (Author/MSE)

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COMPARATIVE ACADEMIC ACHIEVEMENT OF REGULARLY ADMITTED AND CONDITIONALLY ADMITTED FRESHMEN IN A STATE UNIVERSITY

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Comparison of provisionally admitted high school graduates with less than a "C" average and matched controls with a "C" average or better at a state university after one to three years revealed highly significant differences in favor of the controls. The criterion was academic status at the university. Analysis of covariance controlling the differences in high school grade-point average showed still a difference in favor of the controls at the five per cent level of significance. The relative weakness of the provisionally admitted students in quantitative reasoning was suggested as a possible contributing factor.

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In recent years many state universities have been torn between their traditional obligation to give every in-state applicant a chance for a college education and the desire to maintain high academic standards. Some institutions have devised special programs or plans for the acceptance of applicants who do not meet the usual standards, but with specific conditions governing admission. This is a progress report of the results of one such program.

A review of selected related literature revealed that Stanley (1971) discussed various aspects of problems of "predicting college success of the educationally disadvantaged." He advocated that standardized test scores and high school grades should be the principal bases for admission or rejection. Stordahl (1969) made an assessment of a special "early entry" program for "poor college risks" at Northern Michigan University

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which was similar in some respects to the program assessed in this report. Bowers (1970) found significant differences between the regression equations predicting first-semester grade-point average at the University of Illinois from high school percentile rank and School and College Ability Test scores for regularly admitted freshmen as compared with those in a "Special Educational Opportunities Program."

METHOD

The state university campus which provided the setting for this study admits as freshmen all in-state residents who have completed seven semesters in high school with at least a "C" average for a minimum of 15 units, variously distributed as specified by the different colleges of the university. In practice, almost all freshmen have a high school diploma. An alternative method of entry provides that those residents with less than a "C" average for high school work may be admitted to the first summer term, during which they will be enrolled in an English composition course and one other course "of substantial academic content" chosen from a list of courses approved by the Committee on Admissions.

Students with less than a "C" average in high school who enter in the first summer term under this plan are graded in the same manner as other students, with whom they are associated in English composition and other classes. Those who earn a 2.00 (C) average or better in the first summer term are thereby fully qualified to re-enroll in the fall semester as regular students. Those who earn a grade-point average of 1.25 - 1.99 are permitted to enroll again in the fall semester, but on probation. Those with less than 1.25 are not admissible in the fall semester unless they choose to enroll in the second summer term and also succeed in raising their respective grade-point averages to 2.00 or more.

The experimental (E) group in this study was composed of those with less than a "C" average for high school work who chose to attempt to qualify under the plan outlined above in the first summer terms of 1967-70. The control (C) group was made up of regularly admitted students ("C" averages or better in high school), each randomly selected to match an "E" group member on several characteristics: 1) entry in the same year, 2) sex, 3) within ten percentile points on total School and College Ability Test score as well as on total Cooperative Reading Comprehension Test score. Before settling for as much as ten-point discrepancies in these test scores, the authors made an unsuccessful effort to match E and C group members within five percentile points for these scores.

During the first summer term a professor in the College of Education was assigned to work with the incoming "E" group. He found that many joining this group each summer voiced problems of family or heterosexual adjustment, or of excessive student activities in high school. He arranged individual conferences as well as group meetings with members of this group. These sessions were concerned with the problems which developed for each "E" student as well as with indoctrination in matters of "campus protocol" -- e.g., being in class regularly and on time, paying attention in class, dressing neatly, planned use of out-of-class time, and arrangements for a conference with a class instructor when there was need of this. In all other respects the institutional treatment of the E-group members was similar to that of C-group members. Being together in classes, they were presumably graded by the same standards, for the classroom instructors did not know which were E-group members. To a considerable extent during the first summer term, and completely thereafter, the E-group members were interacting and reacting

in the same institutional environment as were C-group members. Thus, members of both groups were involved in a "natural experiment" in the sense of Cartwright and Zander (1968), i.e., a milieu in which it is "possible to take advantage of changes that are not produced by the investigator but occur in the normal course of events."

RESULTS

Presented in Table 1 are certain comparative frequency data for Group E and the Control Group in April, 1971. The total number in each group was 162. Classification of high school could not be determined for some subjects. The differences between the two groups in status at the university in April, 1971 were significant by chi-square analysis at 0.01.

TABLE 1

Comparative Frequency Data for Plan E and Control Groups

Variable		Plan E	Controls
Classification of High School			
North Central		130	117
A		13	26
B		1	4
C		0	1
Status at University, April, 1971			
Graduated		0	0
Progress Satisfactory		31	123
Probation		32	15
Dropped		54	9
Withdrew		33	13
Transferred		12	2
Grade-Point Average			
0 to 0.50	M	12	2
	F	1	0
0.50 to 1.00	M	22	5
	F	6	1
1.00 to 1.50	M	42	13
	F	9	5
1.50 to 2.00	M	27	43
	F	17	10
2.00 to 2.50	M	12	35
	F	7	12
2.50 to 3.00	M	4	15
	F	0	11
3.00 to 3.50	M	2	8
	F	1	2
3.50 to 4.00	M	0	0
	F	0	0

Table 2 presents an analysis by t-test of certain variables for the E and C groups.

TABLE 2

Analysis by t-Test of Plan E and Control Groups

Variable	Mean Controls	S.D. Controls	Mean Plan E	S.D. Plan E	Mean Diff.	t Value	Prob. of t
1. Age	20.69	2.42	20.42	1.15	- 0.27	- 1.4201	0.1575
2. HS GPA	2.64	0.56	1.65	0.39	- 0.99	-19.6632	0.0000
3. Univ.GPA	2.03	0.61	1.33	0.67	- 0.70	-11.3992	0.0000
4. Sem. Hrs	54.87	33.30	24.86	25.05	-30.01	-10.6029	0.0000
5. SCAT V	26.88	8.93	27.23	9.14	0.35	0.7122	0.4773
6. SCAT Q	29.45	10.21	27.80	8.28	- 1.65	- 2.6461	0.0090
7. SCAT Tot	55.63	14.28	54.90	14.64	- 0.73	- 2.0541	0.0416
8. Read Tot	27.13	7.65	26.35	8.03	- 0.78	- 2.8833	0.0045
9. Engl Tot	40.26	13.54	36.94	11.60	- 3.31	- 2.6094	0.0099
	N-162		N-162				

It was not surprising that high school grade-point average (Variable 2) was significantly different for the two groups, for they were selected on this basis. Neither was it very surprising that the Cooperative English Expression Test (Variable 9) showed a highly significant difference, for this presumably measured the understanding of English expression acquired in high school.

In order to explore the effect of controlling statistically the selection variable, high school grade-point average, an analysis of covariance was done as indicated in Table 3.

TABLE 3

Analysis of Covariance: Groups E and C

Item	Between	Within	Total
Sum of Squares Covariate (HS GPA)	79.86	74.83	154.69
Sum of Squares Criterion (Univ. GPA)	39.35	132.10	171.45
Sum of Products	56.06	36.23	92.29
Degrees of Freedom	1	322	323
Adjusted Sum of Squares	1.83	114.55	116.39
Adjusted Degrees of Freedom	1	321	322
Variances Estimates	1.83	0.36	
F - ratio: 5.14		Prob. of F: 0.0227	
Adjusted Mean Univ. GPA: E 1.57 C 1.78			

It will be noted that even with the differences in high school grade-point averages statistically controlled, there was still a significant difference between the two groups at the 0.05 level. This finding suggests that the differences in high school grade-point averages, though helpful, were not a sufficient explanation of the differences in university grade-point averages.

DISCUSSION

Reference to Table 1 shows that the attempted matching of the E and C groups for total scores on the SCAT and reading comprehension tests met with little success. The t-test for the reading test shows differences

significant at the 0.01 level, and that for the SCAT total score at the 0.05 level. In the latter case the difference in favor of the controls was attributable entirely to differences in the SCAT Quantitative scores, with a difference significant at the 0.01 level. The mean for the E group on the SCAT Verbal score was actually higher than that for the C group.

The foregoing analysis suggests that relative weakness in quantitative reasoning may have contributed something to the much lower university grade-point average of the E group, quite apart from that reflected in the high school grade-point average. This would be conceivable if it could be demonstrated that members of the E group averaged less mathematics courses in high school than did members of the C group. Further research along this line is indicated.

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